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Subject | Minutes of the Working Groups WG1, WG2 and WG4 Meetings of COST Action IC1106 “Integrating Biometrics and Forensics for the Digital Age”

*Coventry, UK
7th September 2012*

List of Participants:

- Chang-Tsun Li, Paulo Correia, Claus Vielhauer, Andrzej Drygajlo, Jana Dittmann, Emilio Mordini, Duncan Hine, Meryem Erbilek, Christian Kraetzer, Yannis Panagakis, Sotiris L Karavarsamis

Agenda

1. Introduction
2. WG1 meeting
 - 2.1. Sharing and collection of forensic databases
 - 2.2. Recent advances, with respect to the Alghero meeting
3. WG2 meeting
 - 3.1. Presentation on the FP7 project “Digital Image and Video Forensics” (DIVEFOR)
 - 3.2. Talk on the UK experience in biometrics and how they interact with Government efforts to sort out identity and border control
4. WG4 meeting
 - 4.1. Discuss requirements for the acquisition and image processing of forensic relevant traces.
 - 4.2. Discussion of potential sensor equipment and test samples exchange.
5. Closing of the meeting

1 - Introduction

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The meeting was chaired by Prof. Paulo Correia in substitution of the Action Chair, Prof. Massimo Tistarelli, who could not be present. The participants were welcomed, the organizer, Prof. Chang-Tsun Li, was thanked for hosting this meeting in such a pleasant venue and a very brief presentation about the IC1106 Action and its status was done.



The participants briefly introduced themselves.

There was reminder about the coming COST IC1106 Workshop, to be held 4-5 April, 2013, in Lisbon. The deadline for paper submission is November 9th, 2012.

2 – WG1 Meeting

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Prof. Claus Vielhauer chaired the WG1 meeting in substitution of Prof. Daniel Ramos, who could not attend the meeting.

The agenda had been previously distributed and Daniel Ramos made available a presentation covering the issues to discuss in the meeting.

Concerning the first agenda item, sharing and collection of forensic databases, the critical importance of having realistic forensic data (either from casework, or not from casework, but in forensic conditions) was recognized. Prof. Daniel Ramos mentioned an existing palmprint database, from Nankai University (China), and the Spanish Ahumada III speech database, both available upon request.

Prof. Andrzej Drygajlo mentioned that EPFL owns a forensics speech DB in French, but there may issues in making it available to other countries.

The interest on the topic by several members of the Action has been recognized, notably considering the possibility to create a DB with data acquired under forensic conditions, even if there may be some privacy or legal issues still be evaluated.

Prof. Claus Vielhauer volunteered to make available an artificial latent fingerprint DB, currently under construction based on the artificial fingerprints generated using synthetic fingerprint generation, such as the method of Davide Maltoni's et. al, and adding realistic degradations expected to be found in forensic scenarios (sweat, ...). Note that due to the laborious efforts in producing these, it will be of rather limited size and for selected scenarios (e.g. flat surface) only.

Dr. Emilio Mordini mentioned he has a contact in Israel that might eventually allow access to (a part of) their forensics DB (fingerprint, face, DNA).

Andrzej Drygajlo recalled that it is also important to contact other existing large DB sources like CASIA or NIST.

Concerning the second agenda item, recent advances, with respect to the Alghero meeting, the 6th European Academy of Forensic Science Conference (EAFS 2012) took place recently with a strong participation by Action members, notably including the Workshop on Forensic Automatic Speaker Recognition organized by Andrzej Drygajlo and the Workshop on Assessment of Performance of Forensic Likelihood-ratio-based Evaluation Methods organized by Didier Meuwly in collaboration with Daniel Ramos and David van Leeuwen, precisely one of the core topics addressed by WG1.

Andrzej Drygajlo mentioned a new European project about to start "Methodological Guidelines for Semi-automatic and Automatic Speaker Recognition for Case Assessment and Interpretation" he will be leading during three years in the framework of the European Network of Forensic Science Institutes (ENFSI) Monopoly Program



“Improving Forensic Methodologies across Europe (IFMAE)” where it is possible to have cooperation with external experts.

Emilio Mordini raised the question whether it would make sense to create an inventory of forensic DBs in Europe.

AP – Emilio Mordini: put Daniel Ramos in contact with Israel representative of forensic DB.

AP – Daniel Ramos: distribute the meeting slides to all WG1 participants?

3 – WG2 Meeting

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After the break, the WG2 meeting started with a presentation by Prof. Chang-Tsun Li about the FP7 project “Digital Image and Video Forensics” (DIVEFOR). The project addresses two main areas: (i) Device fingerprint based forensics and (ii) Hidden data based forensics. Key project participants are also members of the COST IC1106 Action. The second part of the meeting consisted in a presentation by Dr. Duncan Hines, currently a part-time industrial fellow at Warwick, who discussed the UK experience in biometrics and how they interact with Government efforts to sort out identity and border control. There was a lively debate notably about the issues and differences between Identity and Security.

4 – WG4 Meeting

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Prof. Claus Vielhauer chaired the WG4 meeting, in representation of Prof. Jana Dittmann, also present but occupied with the ACM MMSec Workshop that was running in parallel. She also organized COST Action IC1106 Special Session “Pattern Recognition and Security for Crime Scene Forensics Traces: From Latent Fingerprints up Material and Technical Traces”.

There was a discussion on the requirements for the acquisition and image processing of forensic relevant traces.

It was mentioned that technology should be used as much as possible to do an automated exhaustive search for forensic marks in crime scenes (e.g. latent fingerprints), to narrow the areas for further analysis by experts.

Different technologies for acquisition of forensic data for trace localisation being explored at Magdeburg/Brandenburg were discussed.

Christian Kraetzer made a demonstration using an IR sensor capable of identifying thermal evidences of where fingerprints were left in a very fast manner. Depending on the sensor, traces from fingerprints created a couple of hours before can still be found.

Also a UV sensor was shown, but its operation could not be demonstrated.



5 – Closing of the Meeting

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It was recalled that the following special session on “Biometrics and Security” of the ACM MM Sec Workshop was organised by COST IC1106, “constituting” the final part of the meeting.

The next COST IC1106 meetings, MC and WGs, will be in Paris, in December 2012. The meeting was closed.